

STATISTICAL RESULTS FROM THE FOOD ALLIANCE ATTITUDE/BEHAVIOR SURVEYS

March 1999

Summary by Andrea Clarke, Ph.D. – USDA-Natural Resources Conservation Service

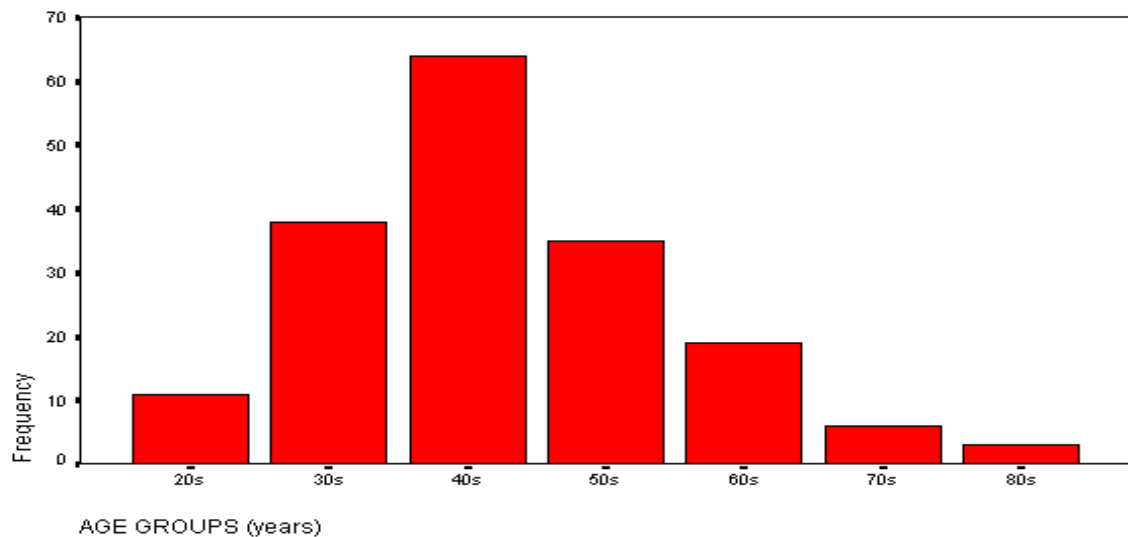
Total number of surveys taken: **226**

Over two days across five stores in the Portland, Oregon suburban area.

DEMOGRAPHICS

AGE CATEGORIES

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
20s	11	4.9	6.3	
30s	38	16.8	21.6	
40s	64	28.3	36.4	<< most prevalent age group
50s	35	15.5	19.9	
60s	19	8.4	10.8	
70s	6	2.7	3.4	
80s	3	1.3	1.7	
.	50	22.1		#people who declined to respond
Total	226	100.0	100.0	Valid cases: 176

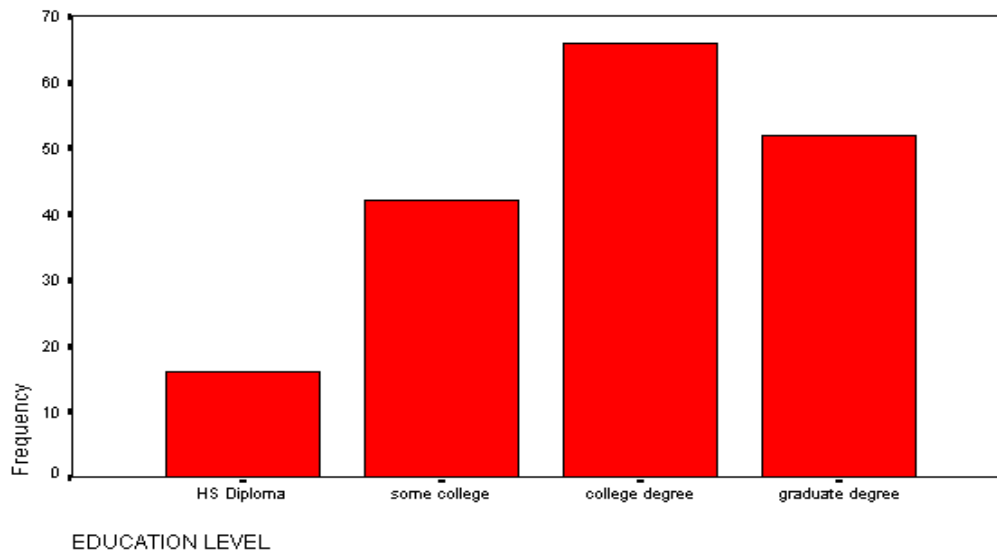


GENDER

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
Male	85	37.6	37.8	
Female	140	61.9	62.2	} higher percentage of women shoppers-- consistent with literature about consumers
.	1	.4		#people who declined to respond
Total	226	100.0	100.0	Valid cases: 225

EDUCATION LEVEL

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>		
HS Diploma	16	7.1	9.1		
Some college	42	18.6	23.9		
College Degree	66	29.2	37.5	} 67% college degree or higher	
Graduate degree	52	23.0	29.5		
	50	22.1	#people who declined to respond		
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Total	226	100.0	100.0	Valid cases:176	

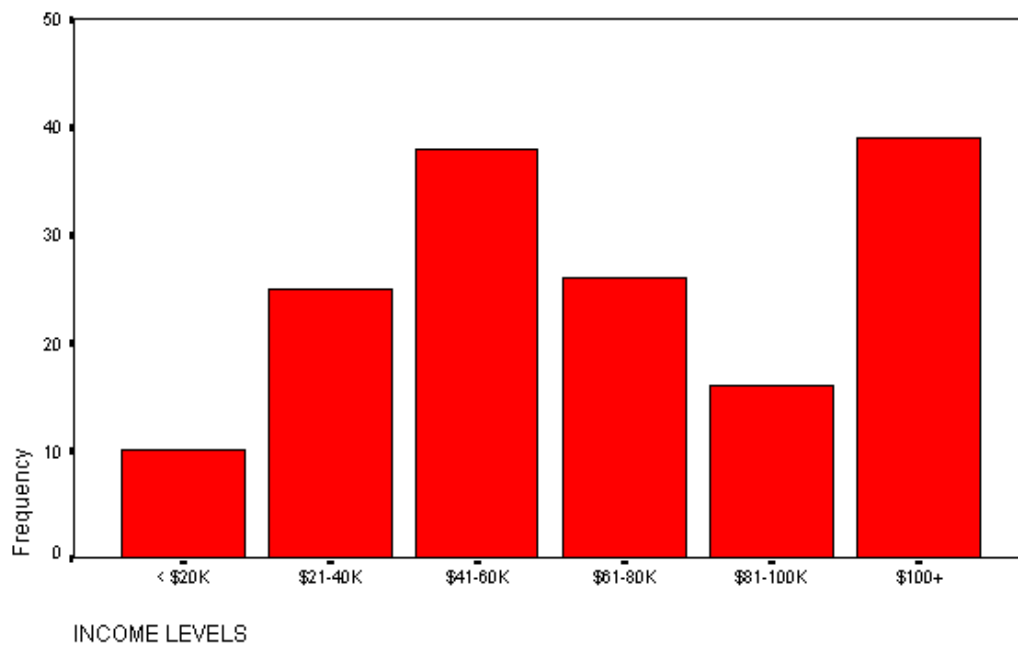
**NUMBER OF PEOPLE IN YOUR HOUSEHOLD (including yourself)**

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
1	22	9.7	13.0	
2	70	31.0	41.4	< < majority of two person households
3	36	15.9	21.3	
4	31	13.7	18.3	
5+	10	4.4	5.9	
	57	25.2	#people who declined to respond	
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Total	226	100.0	100.0	Valid cases: 169

INCOME LEVEL

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
\$<20K	10	4.4	6.5	
\$21-40K	25	11.1	16.2	
\$41-60K	38	16.8	24.7	<<
\$61-80K	26	11.5	16.9	
\$81-100K	16	7.1	10.4	
\$100K +	39	17.3	25.3	<<
	72	31.9	#people who declined to respond	

Total	226	100.0	100.0	Valid cases: 154

**DISTRIBUTION OF SURVEYS ACROSS STORES**

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
Palisades	23	10.2	10.2
Garden Home	32	14.2	14.2
Wilsonville	71	31.4	31.4
Stroheckers	58	25.7	25.7
Troutdale	42	18.6	18.6

Total	226	100.0	100.0

BEHAVIORAL OBSERVATION VARIABLES

For each survey, interviewers with stop watches and survey forms on clipboards, were instructed to pick a consumer in the produce department and observe their behavior with regard to the following questions.

DID PERSON STOP AT THE TFA PRODUCE DISPLAY?

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
no	123	54.4	54.4
yes	103	45.6	45.6
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Total	226	100.0	100.0

DID PERSON LOOK AT TFA SIGNS ON DISPLAY?

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
no	175	77.4	78.5	<<most people observed were not looking at signs
yes	48	21.2	21.5	
	3	1.3	#missed observations	
<hr/>				
Total	226	100.0	100.0	Valid cases: 223

HOW DID THEY LOOK AT THE TFA SIGNS ? (read or look?)

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
no	175	77.4	78.5	<<most people just looked at display signs
read	19	8.4	8.5	
just look	29	12.8	13.0	
	3	1.3	#missed observations	
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Total	226	100.0	100.0	Valid cases: 223

IF PEOPLE LOOKED AT (and/or read) THE TFA SIGNS, FOR HOW LONG ?
(latency measured in seconds)

# seconds	Frequency	Valid		
		Percent	Percent	
1	1	.4	2.4	
1	5	2.2	12.2	
2	11	4.9	26.8	<< most common amount of time spent looking at signs
3	7	3.1	17.1	
4	4	1.8	9.8	
6	1	.4	2.4	
7	3	1.3	7.3	
9	1	.4	2.4	
10	1	.4	2.4	
11	2	.9	4.9	
12	1	.4	2.4	
13	1	.4	2.4	
14	1	.4	2.4	
19	1	.4	2.4	
27	1	.4	2.4	
	185	81.9	#observed not looking at signs + missed observations	
Total	226	100.0	100.0	Valid cases: 41

DID PERSON PICK UP APPLE OR PEAR ?

Value	Frequency	Percent	Valid	
			Percent	
no	125	55.3	55.6	
yes	100	44.2	44.4	
	1	.4	#missed observations	
Total	226	100.0	100.0	Valid cases: 225

DID PERSON PLACE APPLES/PEARS IN BASKET/SHOPPING CART ?

Value	Frequency	Percent	Valid	
			Percent	
no	131	58.0	58.2	
yes	94	41.6	41.8	
	1	.4	#missed observations	
Total	226	100.0	100.0	Valid cases: 225

SUMMARY OF BEHAVIOR OBSERVATIONS (frequency of pro-environment behavior)

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
none	106	46.9	48.0	
1	10	4.4	4.5	(composite score : total # of all observed behaviors)
2	21	9.3	9.5	
3	51	22.6	23.1	
4	33	14.6	14.9	
	5	2.2	#missed observations	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 221

ATTITUDES

As the customer being observed was about to leave the produce department, the interviewer was instructed to intercept that customer and ask them if they would be willing to do a 2 minute survey. The following are questions that the customer was asked to respond to (in writing) on the survey form.

DID YOU NOTICE THE FOOD ALLIANCE SEAL/SIGN IN THE PRODUCE AREA ?

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
no	145	64.2	82.4	
yes	31	13.7	17.6	
	50	22.1	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 176

DID THIS SEAL/SIGN INFLUENCE YOUR DECISION TO BUY THE PRODUCE ?

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
no	160	70.8	93.6	
yes	11	4.9	6.4	
	55	24.3	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 171

DO YOU LOOK FOR PRODUCTS THAT SAY THEY ARE ENVIRONMENTALLY FRIENDLY ?

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
no	74	32.7	43.5	
yes	96	42.5	56.5	<<
	56	24.8	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 170

The survey participant was asked to use this rating when evaluating their attitudes about the following statements :

5 = strongly agree / 4 = agree / 3 = neutral / 2 = disagree / 1 = strongly disagree

HOW FOOD IS GROWN AFFECTS THE ENVIRONMENT.

<i>Value</i>	<i>Frequency</i>	<i>Valid Percent</i>	<i>Percent</i>	
neutral	23	10.2	13.0	
agree	65	28.8	36.7	}— 87% agree with statement
strongly agree	89	39.4	50.3	
	49	21.7	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 177

PRODUCTS THAT CLAIM TO BE ENVIRONMENTALLY FRIENDLY SHOULD BE CERTIFIED AS SUCH.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	1	.4	.6	
disagree	4	1.8	2.3	
neutral	22	9.7	12.4	
agree	68	30.1	38.4	}__ 85% agree with statement
strongly agree	82	36.3	46.3	
	49	21.7	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 177

I WOULD BE WILLING TO PAY MORE FOR PRODUCE GROWN IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	2	.9	1.1	
disagree	13	5.8	7.4	
neutral	53	23.5	30.1	
agree	82	36.3	46.6	}__ 62% agree with statement
strongly agree	26	11.5	14.8	
	50	22.1	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 176

IT IS IMPORTANT FOR ME TO KNOW HOW MY FOOD IS GROWN.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	1	.4	.6	
disagree	4	1.8	2.3	
neutral	42	18.6	23.7	
agree	85	37.6	48.0	}__ 74% agree with statement
strongly agree	45	19.9	25.4	
	49	21.7	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 177

I BELIEVE THERE IS A CONNECTION BETWEEN THE HEALTH OF THE ENVIRONMENT AROUND ME, AND MY WELL-BEING.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
neutral	10	4.4	5.6	
agree	72	31.9	40.7	}__ 95% agree with statement
strongly agree	95	42.0	53.7	
	49	21.7	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 177

ENVIRONMENTAL CONCERN ATTITUDE SCALE

The following attitude score for measuring “environmental concern” was also used in the attitude portion of this survey. The scores for each individual’s level of “environmental concern” are listed below. The distribution of these scores is also shown graphically.

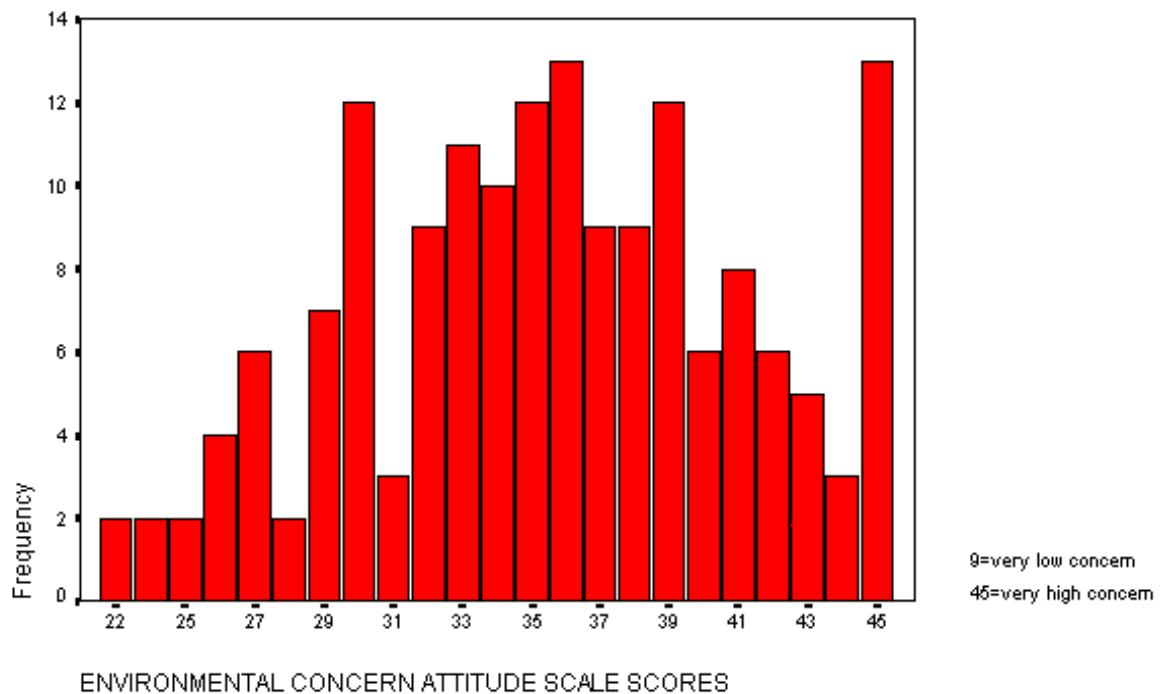
- The lowest possible score (indicating very low environmental concern) is the value 9.
- The highest possible score (indicating very high environmental concern) is the value 45.

These scores are followed by individual analysis of each question that made up the “environmental concern” attitude dimension. Please note that some of the questions were reverse-scored to obtain final attitude scale scores.

“ENVIRONMENTAL CONCERN” ATTITUDE SCALE SCORES

Score	Frequency	Percent	<i>Valid</i>	
			Percent	
22	2	.9	1.2	
23	2	.9	1.2	
25	2	.9	1.2	
26	4	1.8	2.4	
27	6	2.7	3.6	
28	2	.9	1.2	
29	7	3.1	4.2	
30	12	5.3	7.2	
31	3	1.3	1.8	
32	9	4.0	5.4	
33	11	4.9	6.6	
34	10	4.4	6.0	
35	12	5.3	7.2	
36	13	5.8	7.8	average score: 35.5
37	9	4.0	5.4	lowest score possible: 9
38	9	4.0	5.4	highest score possible: 45
39	12	5.3	7.2	
40	6	2.7	3.6	
41	8	3.5	4.8	
42	6	2.7	3.6	
43	5	2.2	3.0	
44	3	1.3	1.8	
45	13	5.8	7.8	
	60	26.5		#people who declined to respond or did not provide answers to all scale items.

Total	226	100.0	100.0	Valid cases: 166



The survey participant was asked to use this rating when evaluating their attitudes about the following statements :

5 = strongly agree / 4 = agree / 3 = neutral / 2 = disagree / 1 = strongly disagree

Attitude Scale item:

ONE OF THE MOST IMPORTANT REASONS TO CONSERVE IS TO PRESERVE WILD AREAS.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
disagree	11	4.9	6.3	
neutral	33	14.6	18.8	
agree	69	30.5	39.2	
strongly agree	63	27.9	35.8	
	50	22.1	#people who declined to respond	
<hr/>				
Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:

WILD PLANTS AND ANIMALS HAVE A RIGHT TO LIVE UNMOLESTED BY HUMANS.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	4	1.8	2.3	
disagree	9	4.0	5.1	
neutral	38	16.8	21.5	
agree	53	23.5	29.9	
strongly agree	73	32.3	41.2	
	49	21.7	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 177

Attitude Scale item:

IN THIS COUNTRY, LAND POLLUTION IS NOT YET ONE OF OUR SERIOUS ENVIRONMENTAL PROBLEMS.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	9	4.0	5.1	
disagree	11	4.9	6.3	
neutral	14	6.2	8.0	
agree	59	26.1	33.5	
strongly agree	83	36.7	47.2	
	50	22.1	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:

WE MUST PREVENT ANY TYPE OF ANIMAL FROM BECOMING EXTINCT, EVEN IF IT MEANS SACRIFICING SOME THINGS FOR OURSELVES.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	4	1.8	2.3	
disagree	30	13.3	17.0	
neutral	44	19.5	25.0	
agree	55	24.3	31.3	
strongly agree	43	19.0	24.4	
	50	22.1	#people who declined to respond	
	-----	-----	-----	
Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:

I' D BE WILLING TO MAKE PERSONAL SACRIFICES FOR THE SAKE OF SLOWING DOWN POLLUTION EVEN THOUGH THE IMMEDIATE RESULTS MAY NOT SEEM SIGNIFICANT.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
disagree	3	1.3	1.7	
neutral	23	10.2	13.1	
agree	84	37.2	47.7	
strongly agree	66	29.2	37.5	
	50	22.1	#people who declined to respond	
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Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:

ENDANGERED WILDLIFE SPECIES SHOULD NOT BE PROTECTED IF THE COST OF PROTECTION IS PROHIBITIVE.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	11	4.9	6.4	
disagree	26	11.5	15.1	
neutral	54	23.9	31.4	
agree	46	20.4	26.7	
strongly agree	35	15.5	20.3	
	54	23.9	#people who declined to respond	
<hr/>				
Total	226	100.0	100.0	Valid cases: 172

Attitude Scale item:

IT MAKES ME SAD TO SEE NATURAL ENVIRONMENTS DESTROYED.

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	1	.4	.6	
neutral	7	3.1	4.0	
agree	61	27.0	34.7	
strongly agree	107	47.3	60.8	
	50	22.1	#people who declined to respond	
<hr/>				
Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:**UNIQUE ENVIRONMENTS SHOULD BE PROTECTED AT ALL COSTS.**

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	5	2.2	2.8	
disagree	18	8.0	10.2	
neutral	43	19.0	24.4	
agree	61	27.0	34.7	
strongly agree	49	21.7	27.8	
	50	22.1	<i>#people who declined to respond</i>	

Total	226	100.0	100.0	Valid cases: 176

Attitude Scale item:**NATURAL ECOSYSTEMS HAVE A RIGHT TO EXIST FOR THEIR OWN SAKE,
REGARDLESS OF HUMAN CONCERNS AND USES.**

<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	
strongly disagree	4	1.8	2.3	
disagree	23	10.2	13.2	
neutral	32	14.2	18.4	
agree	66	29.2	37.9	
strongly agree	49	21.7	28.2	
	52	23.0	<i>#people who declined to respond</i>	

Total	226	100.0	100.0	Valid cases: 174

INTERESTING RELATIONSHIPS IN THE DATA

Survey Details

Surveys taken March 1999
Portland, Oregon



- five grocery stores
- 226 respondents
- 85 men, 141 women
- most common age group 40s
- 67% college & graduate educated
- majority high income \$41-60K & +\$100K

Survey results ... attitudes

- 95% believe there is a connection between health of environment and well-being
- 85% believe products that claim to be environmentally friendly should be certified as such



... more attitude results

- ✿ 87% agreed that “How food is grown affects the environment”
- ✿ 61% would be “willing to pay more for products grown in an environmentally responsible manner”
- ✿ THE most credible source of information about their food: word-of-mouth

Attitudes vs. Behavior



Attitude measured by
environmental concern
scale vs. Behavior as
measured by observation
variables.

Variance explained

Attitude item: say they look
for environmentally
friendly products vs.
Behavior: actually
reading TFA display

attitude vs. behavior:
small but significant

The convenience sample size was 226

The number of individual customers who were observed in the produce section but declined to be interviewed was 22% (50 customers). Frequency data presented in the beginning of this report is just that, frequencies of items in the survey.

The following two relationships emerged in the statistical analysis of this data. These are small but significant relationships. It would be nice to collect more data to further evaluate these relationships.

- Regression analysis: The relationship between the attitude scale score and the observed behavior items:
attitude scale score = function of (did consumer stop at TFA display?, did consumer pick up apple/pear?, how long did consumer look at display?, how did consumer look at TFA display?)

Adjusted R^2 => 31% of the variation in attitude score is explained by the behavior variables listed in parentheses. Significant F statistic at the .02 significance level.

- Regression analysis: The relationship between the attitude item “Do you look for products that say they are environmentally friendly?” versus actual observed behavior of reading TFA signs

Adjusted R^2 => 3% of the variation in the attitude statement is explained by the observed behavior of looking at TFA signage. Significant F statistic at the .01 significance level.

Future Goals



- do more surveys
- get sales data from grocery stores
- do survey work with TFA certified and non-certified farmers